

AUTHOR INDEX

- Abou-Elfotouh, F., 237, 347, 477
 Ackerman, B., 77
 Ahrenkiel, R. K., 347
 Al-Jassim, M. M., 429
 Albin, D. S., 231
 Albright, S. P., 77
 Antoniadis, H., 357
 Arya, R. R., 25

 Bajgar, C., 107
 Bakry, A. M., 347
 Basol, B. M., 299
 Bennett, M., 25
 Bhat, P. K., 59
 Bodart, J., 385
 Borrego, J. M., 437
 Bothra, S., 437
 Branz, H. M., 159
 Broman, L., 489
 Bube, R. H., 137

 Cahen, D., 247
 Cannon, T., 279
 Catalano, A., 25
 Chamberlin, R. R., 77
 Chatham, H., 59
 Chien, K.-F., 137
 Chung, B.-C., 205
 Coutts, T. J., 1, 191, 237, 307
 Crandall, R. S., 159, 465
 del Cueto, J., 59

 Daly, J. T., 107
 Davidson, B. N., 121
 Delahoy, A. E., 39, 341
 Devlen, R. I., 169
 Dixon, T. M., 107
 Dunlavy, D. J., 237, 347

 Eberspacher, C., 69
 Emery, K. A., 191, 445, 455
 Ermer, J., 69
 d'Errico, J. J., 391

 Fahrenbruch, A. L., 137
 Fan, J. C. C., 99
 Fedders, P. A., 385
 Fieselman, B., 25
 Fleet, M. L., 373
 Fthenakis, V. M., 149

 Gale, R. P., 99
 Gessert, T. A., 191, 307
 Ghandhi, S. K., 437
 Goldstein, B., 25
 Goral, J. P., 429
 Green, M. A., 3
 Gu, S., 403

 Hamaker, H. C., 205
 Hanak, T. R., 347
 Hester, S., 259
 Hollingsworth, R. E., 59
 Hooper, B., 403
 Horner, G. S., 191, 307
 Hotaling, S. P., 357
 Hulstrom, R., 279

 Jordan, J. F., 77

 Kalina, J., 341
 Kaminar, N. R., 205
 Kapur, V. K., 299
 Keavney, C. J., 107
 Keshavarzi, A., 363
 Kim, D., 137
 King, B. D., 99
 Klose, P., 59
 Kolawa, E., 177
 Kullberg, R. C., 299
 Kuryla, M. S., 205

 Ladle Ristow, M., 205
 Lamorte, M. F., 477
 Langford, A. A., 373
 Lee, J. C., 149
 Li, X., 307
 Liu, C. H., 219
 Liu, D. D., 205
 Longrigg, P., 267

 Lopez-Otero, A., 137
 Lucovsky, G., 121
 Lundstrom, M. S., 363
 Lush, G. B., 363

 MacMillan, H. F., 205
 Mahan, A. H., 373, 465
 Mauk, P. H., 411
 McClelland, R. W., 99
 Melloch, M. R., 363
 Meyers, P. V., 91, 219
 Milnes, A. G., 419
 Mitchell, K. W., 69
 Molarius, J., 177
 Mon, G. R., 289
 Moomaw, W. R., 11
 Morris, J., 25
 Moskowitz, P. D., 149
 Myers, D. R., 455

 Nelson, B. P., 465
 Newton, J., 25
 Nicolet, M.-A., 177
 Norberg, R. E., 385
 Noufi, R., 231

 Osterwald, C. R., 191, 445

 Parsons, G. N., 121
 Partain, L. D., 205
 Pauls, K., 69
 Pernisz, U. C., 391
 Pier, D., 69
 Pierret, R. F., 363

 Ramanathan, V., 219
 Ringel, S. A., 219
 Riordan, C., 279
 Ristein, J., 403
 Rockett, A., 321
 von Roedern, B., 59
 Rohatgi, A., 219
 Ross Jr., R. G., 289

 Sanfacon, M. M., 107
 Santos-Filho, P., 385
 Schade, H., 341

- Schiff, E. A., 169, 357
Schlesinger, T. E., 419
Schropp, R. E. I., 59
Schultz, J. C., 205
Sharp, K. G., 391
Sharps, P., 137
Shing, Y. H., 331
Sites, J. R., 411
Smith, S., 259
Stellwag, T. B., 363
Stoffel, T. L., 455
Sudharsanan, R., 219
Sugimura, R. S., 289
- Tanner, D., 69
Tauc, J., 169
Taylor, P. C., 403
Timmons, M. L., 347
Tobin, S. P., 107, 363
Townsend, T., 259
Tsu, D. V., 121
Tuttle, J. R., 231
- Venkatesan, S., 363
Vernon, S. M., 107, 363
Virshup, G. F., 205
- Wanlass, M. W., 191, 307
Wen, L. C., 289
Werthen, J. G., 205
Whitaker, C., 259
Wiedeman, S., 25
Williamson, D. L., 465
Wojtczuk, S. J., 107
Wolf, M., 247
Wong, D., 419
- Talieh, H., 321
- Wang, C., 121
- Xi, J., 59
- Yang, L., 25

SUBJECT INDEX

- AlGaAs**
 correlation of material properties and recombination losses in $\text{Al}_{0.2}\text{Ga}_{0.8}\text{As}$ solar cells, 363
 deep-level transient spectroscopy of AlGaAs and CuInSe_2 , 347
- Calibration methods**
 solar cell calibration methods, 445
- Carbon**
 electron cyclotron resonance deposition and plasma diagnostics of a-Si:H and a-C:H films, 331
- CdMnTe**
 investigation of polycrystalline CdZnTe, CdMnTe, and CdTe films for photovoltaic applications, 219
- CdS**
 developments on CdS/CdTe photovoltaic panels at Photon Energy, Inc., 77
- CdTe**
 advances in CdTe n-i-p photovoltaics, 91
 developments on CdS/CdTe photovoltaic panels at Photon Energy, Inc., 77
 investigation of polycrystalline CdZnTe, CdMnTe, and CdTe films for photovoltaic applications, 219
 ion-assisted doping of CdTe, 137
- CdZnTe**
 investigation of polycrystalline CdZnTe, CdMnTe, and CdTe films for photovoltaic applications, 219
- Contact design**
 issues in metal/semiconductor contact design and implementation, 177
- CuGaSe₂**
 characterization of thin film CuInSe_2 and CuGaSe_2 : the existence and identification of secondary phases, 231
- CuInSe₂**
 characterization of thin film CuInSe_2 and CuGaSe_2 : the existence and identification of secondary phases, 231
 deep-level transient spectroscopy of AlGaAs and CuInSe_2 , 347
 device-quality CuInSe_2 produced by the hybrid process, 321
 high-efficiency CuInSe_2 solar cells prepared by the two-stage process, 299
 intrinsic defect states in CuInSe_2 single crystals, 237
- Cylindrical concave PV modules**
 reflection losses from cylindrical concave PV modules, 489
- Databases**
 spectral solar radiation data base, models, and instrumentation, 279
- Deep-level transient spectroscopy**
 correlation between fill factors of amorphous silicon solar cells, and their i layer densities of states as determined by DLTS, 341
 deep-level transient spectroscopy of AlGaAs and CuInSe_2 , 347
- Defect equilibrium thermodynamics**
 defect equilibrium thermodynamics in hydrogenated amorphous silicon: consequences for solar cells, 159
- Defect states**
 intrinsic defect states in CuInSe_2 single crystals, 237
- Defects**
 defect suppression and enhancement of minority carrier lifetimes in bulk GaAs, 419
 electron trapping and paramagnetic defect density measurements in hydrogenated amorphous silicon, 357
- Degradation**
 measurement and characterization of voltage- and current-induced degradation of thin-film photovoltaic modules, 289
- Diode quality factor**
 diode quality factor determination for thin-film solar cells, 411

Electrical properties

- electrical and optical properties of amorphous silicon films deposited from fluorodisilanes, 391

Electron cyclotron resonance

- electron cyclotron resonance deposition and plasma diagnostics of a-Si:H and a-C:H films, 331

Electron transport

- picosecond electron transport in hydrogenated amorphous silicon, 169

Electron trapping

- electron trapping and paramagnetic defect density measurements in hydrogenated amorphous silicon, 357

Ellipsometry

- quantification of errors arising in ellipsometry, 477

Excitation spectroscopy

- excitation spectroscopy of photoluminescence in a-Si:H, 403

GaAs

- defect suppression and enhancement of minority carrier lifetimes in bulk GaAs, 419
- III-V solar cell research at Spire Corporation, 107

Greenhouse heat trap

- solar strategies for escaping the greenhouse heat trap, 11

Heat flow measurements

- heat flow measurements for solar cell analysis, 247

High-efficiency cells

- high-efficiency CuInSe₂ solar cells prepared by the two-stage process, 299
- progress on high-efficiency thin film cells and submodules, 69
- thin-film solar cells with over 21% conversion efficiency, 99

Hybrid process

- device-quality CuInSe₂ produced by the hybrid process, 321

Inorganic coatings

- investigation into the use of inorganic coatings for thin film photovoltaic modules, 267

InP

- aspects of processing InP-related solar cells, 307

- III-V solar cell research at Spire Corporation, 107

Ion-assisted doping

- ion-assisted doping of CdTe, 137

Low-temperature deposition

- low-temperature deposition of hydrogenated amorphous silicon (a-Si:H): control of polyhydride incorporation and its effects on thin film properties, 121

Microvoids

- small-angle X-ray scattering studies of microvoids in a-SiC:H and a-Si:H, 465

Microwaves

- evaluation of solar cell material parameters using a non-destructive microwave technique, 437

Multichamber deposition

- recent progress in multichamber deposition of high-quality amorphous silicon solar cells on planar and compound curved substrates at GSI, 59

Multiple reflections

- correction for multiple reflections in infrared spectra of amorphous silicon, 373

Non-destructive characterization

- evaluation of solar cell material parameters using a non-destructive microwave technique, 437

Optical properties

- electrical and optical properties of amorphous silicon films deposited from fluorodisilanes, 391

Photoluminescence

- excitation spectroscopy of photoluminescence in a-Si:H, 403

Plasma diagnostics

- electron cyclotron resonance deposition and plasma diagnostics of a-Si:H and a-C:H films, 331

Polyhydride incorporation

- low-temperature deposition of hydrogenated amorphous silicon (a-Si:H): control of polyhydride incorporation and its effects on thin film properties, 121

Recombination losses

- correlation of material properties and recombination losses in $\text{Al}_{0.2}\text{Ga}_{0.8}\text{As}$ solar cells, 363

Safety

- protecting worker health and safety in photovoltaic research and development laboratories, 149

Silicon

- correction for multiple reflections in infrared spectra of amorphous silicon, 373
- correlation between fill factors of amorphous silicon solar cells, and their i layer densities of states as determined by DLTS, 341
- defect equilibrium thermodynamics in hydrogenated amorphous silicon: consequences for solar cells, 159
- electrical and optical properties of amorphous silicon films deposited from fluorodisilanes, 391
- electron cyclotron resonance deposition and plasma diagnostics of a-Si:H and a-C:H films, 331
- electron trapping and paramagnetic defect density measurements in hydrogenated amorphous silicon, 357
- excitation spectroscopy of photoluminescence in a-Si:H, 403
- low-temperature deposition of hydrogenated amorphous silicon (a-Si:H): control of polyhydride incorporation and its effects on thin film properties, 121
- picosecond electron transport in hydrogenated amorphous silicon, 169
- recent developments in amorphous silicon photovoltaic research and manufacturing at Chronar Corporation, 39
- recent progress in multichamber deposition of high-quality amorphous silicon solar cells on planar and compound curved substrates at GSI, 59

- review of progress on a-Si alloy solar cell research, 25

- silyl rotors and amorphous silicon, 385
- small-angle X-ray scattering studies of microvoids in a-SiC:H and a-Si:H, 465

Silyl rotors

- silyl rotors and amorphous silicon, 385

Small-angle X-ray scattering

- small-angle X-ray scattering studies of microvoids in a-SiC:H and a-Si:H, 465

III-V Solar cells

- III-V solar cell research at Spire Corporation, 107

- recent advances in multi-junction

- III-V solar cell development, 205

- TEM studies of atomic ordering in some ternary semiconductors used in photovoltaic applications, 429

Solar radiation

- spectral solar radiation data base, models, and instrumentation, 279
- uncertainty estimates for global solar irradiance
- measurements used to evaluate PV device performance, 455

Tandem cells

- practical considerations in tandem cell modeling, 191

Ternary semiconductors

- TEM studies of atomic ordering in some ternary semiconductors used in photovoltaic applications, 429

Transmission electron microscopy

- TEM studies of atomic ordering in some ternary semiconductors used in photovoltaic applications, 429

Two-stage process

- high-efficiency CuInSe_2 solar cells prepared by the two-stage process, 299

Uncertainty estimates

- uncertainty estimates for global solar irradiance measurements used to evaluate PV device performance, 455

Utility-scale applications

- photovoltaics for utility-scale applications: project overview and data analysis, 259

